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ABSTRACT

The Martin Luther King (MLK) Program was initiated at the university in the fall of 1968 to provide special academic and financial assistance to disadvantaged students, particularly those of minority ethnic background. MLK Program students and students not in the program (non-MLK) were followed up nearly five years after entrance to the College of Liberal Arts (CLA) or General College (GC). MLK students entered with significantly lower test scores, attempted as many credits per quarter, but successfully completed substantially fewer of these credits than their peers. During this period, 15.9 percent of MLK students and 38.6 percent of the non-MLK students in CLA had completed degree requirements. The graduation rates for MLK and non-MLK students in GC were 12.9 percent and 22.6 percent, respectively. In terms of high school performance, precollege test scores, and actual college performance, there were very few differences between MLK and non-MLK students who received degrees. (Author/JMF)

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A COMPARATIVE STUDY OF MARTIN LUTHER KING PROGRAM AND RANDOMLY SELECTED FRESHMEN ENTERING THE UNIVERSITY OF MINNESOTA IN FALL, 1970: ENTRANCE DATA AND SUBSEQUENT PERFORMANCE

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Abstract

Martin Luther King Program (MLK) students and students not in the Program (Non-MLK) were followed up nearly five years after entrance to the College of Liberal Arts (CLA) or General College (GC). MLK students entered with significantly lower test scores, attempted as many credits per quarter, but successfully completed substantially fewer of these credits than their peers. During this period, 15.9 percent of MLK students and 38.6 percent of the Non-MLK students in CLA had completed degree requirements. The graduation rates for MLK and Non-MLK students in GC were 12.9 percent and 22.6 percent respectively. In terms of high school performance, pre-college test scores, and actual college performance, there were very few differences between MLK and Non-MLK students who received degrees.

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The Martin Luther King (MLK) Program was initiated at the University of Minnesota in the fall of 1968 to provide special academic and financial assistance to disadvantaged students, particularly those of minority ethnic background. The Program was a response to demands, heard both locally and across the nation, that educational institutions attend more closely to the needs of those groups whose opportunity for full participation in our society has been blocked by limited access to higher education. The founders of the MLK Program were aware that many of the prospective students they were targeting would be considered "high risk" (i.e., assessed as having low probability of college success) because of their high school and college entrance test performance. The Program developed gradually until, by fall 1972, it included special recruitment and admissions functions, financial aid procedures, and tutorial programs coordinated by a central office.

After four years of the MLK Program's existence, a series of studies was begun with the support and encouragement of the Vice Presidents for Academic Affairs and Student Affairs to give some insight into the characteristics, performance, and progress toward graduation of the 1,074 students who had entered the University through the Program thus far. Darwin Hendel, a research fellow with the Office of Admissions and Records, conducted this research and produced three reports in the spring of 1973.

The first study, entitled "Progress toward graduation for students enrolled in the Martin Luther King Program at the University of Minnesota: an analysis of overall trends," presented a variety of demographic data and information related to graduation status on all students who had entered the University under the MLK Program from its inception through the fall of 1972. Hendel reported background data for the total MLK group as well as for MLK students within each college. He then compared

graduation status of these students when grouped according to background characteristics (college of entrance, year of entry, status at entry, sex, ethnic background, and age at entry) and concluded, for example, that more women than men received degrees, that older students were more likely than younger students to graduate, and that a larger percentage of Blacks received degrees than other ethnic groups.

The second report, "General College grades for students enrolled in the Martin Luther King Program at the University of Minnesota, fall quarter, 1970 through summer session II, 1972," presented performance summaries by course for MLK students who had taken General College (GC) courses over a two-year period. It also compared composite course performance of subgroups of MLK students which varied on the background dimensions described in the first study. Hendel concluded, for example, that there was a significant difference in average performance among age groups--older students received higher grades in GC courses--but no significant performance differences among the various ethnic groups.

The third report, "College of Liberal Arts grades for students enrolled in the Martin Luther King Program at the University of Minnesota, fall, 1970, through summer session II, 1972," was identical in methodology to the preceding report. Hendel found no significant difference in overall College of Liberal Arts (CLA) course performance for any of the subgroups.

In the conclusion of his first study, Hendel spelled out the limitations of his approach to MLK demographic and graduation status data:

> The data in this report always must be considered with the following, and numerous other, cautions in mind: (1) graduation status for MLK students must be considered in terms of their progress compared with comparable data for other groups of students; (2) the absence of appropriate comparison data makes the interpretation of these data extremely tentative; (3) many of the MLK students in the present report have not been at the University long enough to have graduated from the University. (1973a, p. 10)

The present study, essentially an extension of Hendel's first report (1973c), seeks to go beyond these limitations. An appropriate comparison group of non-MLK students is employed to provide a framework for interpretation. Also, in the years since Hendel's original work, sufficient time has elapsed for students who entered the MLK Program after it had developed into a well-organized effort to have accomplished all of the coursework necessary for completion of a bachelor's degree. A similar extension of Hendel's CLA course performance study (1973a) is nearing completion and will be reported in a subsequent paper.

Method

Sample

Selection of an appropriate MLK sample was made in the winter quarter of 1975, based on the criterion of a common initial quarter of registration. Two qualifications were considered essential in the determination of this common starting point. First, the size of the sample should be as large as possible. Second, sufficient time should have elapsed to allow for completion of a bachelor's degree. MLK students who entered in the fall of 1970 best met these standards. Fall quarter is the time when the largest group of new students is initiated into the system, and those beginning in 1970 would have had four years plus two quarters to complete a degree by the time we began the analysis of their overall progress. Four years is generally considered the minimum time for a student to complete a bachelor's degree by registering for fifteen credits per quarter for three quarters per year. The fall, 1969 group would have had more time latitude for completion of a degree but would have been considerably smaller. The fall, 1971 group would have been even larger, but would not

have had a full four years to work toward a degree.

Subsequently, it was decided that the study would be limited to MLK students in CLA and GC. These two colleges account for about 95 percent of the total MLK enrollment; the other colleges have such small MLK enrollments that the analyses performed for this study would have been impossible. Throughout the study CLA and GC are viewed separately, since their students differ considerably. GC is an open admissions college, admitting students of all ability levels, while CLA has well-defined entrance requirements which generally restrict admission to students in the upper half of their high school graduating class.

Hendel's study (1973c) had identified all MLK students by year of University entry and by college. For the present study, the 1970 entrants were selected from Hendel's complete group, and this subgroup was then further sorted to yield only students who registered for the first time fall quarter and who were new high school (NHS) students (having completed fewer than 39 credits at another institution). When this group was divided by college, there were 57 CLA students and 124 GC students. All of these students were included in the study.

The next step was to draw samples of comparable non-MLK students. For this purpose, a list of all NHS students who first registered in fall, 1970 was drawn from Admissions and Records computer files. This list was then sorted by college, and previously identified MLK students were eliminated. Finally, random samples comparable in size to the MLK college samples were drawn from the list.

Procedure

The data sought for this study fall into three categories of variables: (a) demographic, (b) high school and pre-college test performance, and (c) college attendance and performance. Information in categories (a) and (c) was drawn from student transcripts. The high school and pre-college test data were drawn from Admissions and Records computer files. Data from both sources were coded and punched on computer cards for analysis. A description of the information from the student transcripts and computer file may be found in Appendix A, which gives the data card format for the study. Appendix B is a listing of how problem data and unusual situations were incorporated into the standard coding format.

The data were then processed by computer using the Statistical Package for the Social Sciences to provide distributions and basic statistics for all variables within each of the four samples: MLK students in CLA (MLK CLA), non-MLK students in CLA (Non-MLK CLA), MLK students in GC (MLK GC), and non-MLK students in GC (Non-MLK GC). Additional computations were performed on the data to yield average credits attempted per quarter, average credits completed per quarter, coefficient of completion, and grade point average for each student.

Three sets of comparisons were made in this study. The first contrasted the MLK and Non-MLK samples within each college; the second compared students who received degrees with students who received none within each college sample; and a third pairing contrasted MLK students who had received degrees with Non-MLK students who had received degrees in the same college. Chi-square analyses were run on categorical data to assess variation in pattern. Student's *t* tests were run on each variable comparison to determine whether observed differences in means were statis-

tically significant. An alpha level of .05 was established as the minimum significance level; therefore, the probability of such differences occurring by chance, under the hypothesis of no difference in the population means, is less than five in one hundred. Non-significant results reported in this study are probably the result of chance variation; therefore, neither their magnitude nor their direction is interpretable.

Results

Group Characteristics

Each student's age as of 1 October 1970 was determined from birth date information on the transcripts. Table 1 shows that in both CLA and GC the MLK students are, on the average, about two years older than their Non-MLK counterparts. The age differences in both colleges are statistically significant.

The ratio of females to males within each sample is shown in Table 2. In CLA the Non-MLK sample consists of more than 60 percent males,[1] whereas the percentage of males in the MLK group in that college is only 42 percent. The ratios within the two GC samples are almost identical; males comprise about 57 percent of each group.

The ethnic background distributions for MLK groups in each college are presented in Table 3; similar data for non-MLK students are not available. Black students predominate in both colleges while Chicanos and Native Americans represent much smaller numbers in the MLK Program

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[1] This figure differs somewhat from the percentage of NHS males reported in the fall, 1970 Official Registration Statistics; according to that report, 47.5 percent of the total group is male. The Non-MLK proportions in GC, however, match those reported in the Registration Statistics.

Table 1

Size and Mean Age of MLK and Non-MLK Samples in CLA and GC

	MLK	Non-MLK
CLA		
Sample size	57	57
Mean age	20.0	18.0
GC		
Sample size	124	124
Mean age	21.3	19.8

Table 2

Sex Distribution Within MLK and Non-MLK Samples in CLA and GC

	MLK		Non-MLK	
	N	%	N	%
CLA				
Female	33	57.9	21	36.8
Male	24	42.1	36	63.2
GC				
Female	54	43.5	53	42.7
Male	70	56.5	71	57.3

Table 3

Ethnic Background of MLK Students
in CLA and GC Samples

	CLA		GC	
	N	%	N	%
Asian American	0	0.0	0	0.0
Black	22	38.6	54	43.5
Chicano	3	5.3	24	19.4
Native American	8	14.0	29	23.4
White	19	33.3	15	12.1
Unknown	5	8.8	2	1.6
Total	57	100.0	124	100.0

as a whole and register primarily in GC. In the fall of 1970 there were no Asian American students registering for the first time in the MLK Program. One-third of the MLK students in CLA are White; however, in GC, White students comprise only twelve percent of the MLK group.

College of Liberal Arts

MLK vs. Non-MLK. An analysis of high school performance and pre-college test data from the CLA samples reveals marked differences between the MLK and Non-MLK students. Table 4 demonstrates an average difference of one-half grade point separating the MLK from the Non-MLK group on high school academic grade point average. The two groups are also separated by ten percentile points in their respective average high school percentile rank at graduation. Both differences favor the Non-MLK group, and both are statistically significant.[2]

Table 5 summarizes college entrance test scores for the two groups. Standard scores from each of the four sub-tests of the American College Testing Program's aptitude battery and their average (ACT Composite), as well as the raw score on the Minnesota Scholastic Aptitude Test (MSAT), are included. Both of these tests have been integral to the selection and placement procedures of the University. The average Non-MLK score is significantly higher than the average MLK score on each of these tests.

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[2]The difference scores in Table 4 and subsequent tables are calculated by subtracting the figure in the second column from the figure in the first column; therefore, a "-" sign indicates that the first score (in this case, MLK) is lower and a "+" sign that the first score is higher than the second score. Statistical significance in all tables will be indicated by an asterisk (*).

Table 4

Mean High School Performance of
MLK and Non-MLK Samples in CLA

	MLK		Non-MLK		
	Mean	S.D.[a]	Mean	S.D.	Difference
High school percentile rank[b]	70.6	21.1	80.7	16.7	-10.1*
High school academic grade point average	2.53	.78	3.04	.57	- .51*

[a]Standard deviation.

[b]High school percentile ranks were available for only 57.9 percent of the MLK CLA sample, but 84.2 percent of the Non-MLK CLA sample.

*$p < .05$

Table 5

Mean College Entrance Test Scores for
MLK and Non-MLK Samples in CLA

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
ACT					
English	18.4	4.8	21.9	3.2	-3.5*
Mathematics	18.2	7.5	26.3	5.2	-8.1*
Social Studies	21.1	6.1	25.2	4.3	-4.1*
Natural Science	20.8	6.4	26.5	4.7	-5.7*
Composite	19.7	5.2	25.1	3.2	-5.4*
MSAT[a]	42.0	11.2	49.3	8.9	-7.3*

[a]MSAT scores were available for only 63.2 percent of the MLK CLA sample, but 93.0 percent of the Non-MLK CLA sample.

*$p < .05$

Having reviewed high school and pre-college test data on the two CLA samples, we consider next the results of the transcript analysis. During the 4½ year period between the fall of 1970 and the spring of 1975, the average MLK student registered in 7.1 quarters for 14.1 course credits each quarter (Table 6). By comparison, the average Non-MLK student registered in 8.4 quarters for 14.7 course credits. Due to a large amount of variability in the number of quarters registered, the 1.3 quarter registration difference does not reach statistical significance. The difference in credits attempted is statistically significant, but so small as to be of little practical importance.

Table 7 presents the distribution of grades received by the average MLK and Non-MLK student during the period of registration described above. A Chi-square analysis demonstrates significant variation in the two distributions. Considering first the grade categories which qualify as credits successfully completed (A, B, C, D, and P), the MLK student receives substantially fewer As, Bs, and Ps than his or her Non-MLK counterpart. Viewed on a per quarter basis, this yields average credits completed of 9.3 for the MLK and 12.3 for the Non-MLK student, a difference which is both statistically and practically significant (Table 6). The coefficient of completion listed on the same table describes the relationship of completed to attempted credits in proportionate terms. For example, a coefficient of completion of 1.00 indicates that all work attempted was satisfactorily completed while a value of 0.00 means that none of the work was completed satisfactorily. The difference between a .82 completion rate for the Non-MLK student and a .66 completion rate for the MLK student is significant.

Table 6

College Performance Summary of
MLK and Non-MLK Samples in CLA

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
Quarters of registration	7.1	4.4	8.4	4.8	-1.3
Credits attempted per quarter	14.1	1.7	14.7	1.6	-0.6*
Credits completed per quarter	9.3	4.6	12.3	4.1	-3.0*
Coefficient of completion	0.66	0.31	0.82	0.25	-0.16*
Grade point average	2.45	0.72	2.63	0.76	-0.18

*$p < .05$

Table 7

Mean Grade Distribution of
MLK and Non-MLK Samples in CLA

	MLK		Non-MLK		
	Mean	%	Mean	%	Difference[a]
A credits	15.5	15.1	31.2	24.9	-9.8
B credits	22.1	21.6	34.2	27.3	-5.7
C credits	22.3	21.8	26.0	20.7	+1.1
D credits	7.0	6.8	4.6	3.7	+3.1
F credits	1.6	1.6	1.6	1.3	+0.3
P credits	11.9	11.7	16.0	12.8	-1.1
N credits	4.0	3.9	2.1	1.6	+2.3
I credits	11.4	11.2	4.3	3.4	+7.8
W credits	6.6	6.4	5.5	4.4	+2.0

Note. A Chi-square analysis of the two grade distributions indicates they are significantly different ($p < .05$).

[a]Differences reported for A through W credits are in percentages.

Because the coefficient of completion incorporates all grade categories, it is a more comprehensive index of performance than the traditional grade point average, which considers only A through F grades. Grade point averages calculated for each sample yield a mean of 2.45 for the MLK group and a 2.63 for the Non-MLK group; this difference is not significant. A second look at Table 7 will reveal why the course performance patterns result in significant differences on coefficient of completion but not on grade point average. The key is in the relative proportion of N, I, and W grades, which are included in the coefficient of completion as non-successful grades, but are disregarded in the calculation of the grade point average. These three grade categories account for only 9.4 percent of the Non-MLK grade distribution; however, 21.5 percent of the MLK grades fall into these categories. The most significant of the three contributions to the group differences is the I category, which includes course registrations which were maintained throughout the entire quarter without completion of the required work.

The final variable to be considered is actual completion of a degree. This criterion includes actual conferrals of two- and four-year degrees, as well as candidacies for degree, which are usually recorded on the transcript one quarter before completion of the total degree requirements. Of the 57 students in each CLA sample, nine MLK students, or 15.8 percent of the total, qualify as graduates. This contrasts with 22 Non-MLK students, or 38.6 percent of the total, qualifying in the other sample. A Chi-square analysis leads to the conclusion that this difference is significant ($p < .05$). In both samples the majority of the degrees are four-year degrees, and in both cases the most frequently awarded degree is the Bachelor of Arts. Table 8 displays these data.

Table 8

Completion of Degree Requirements by MLK and Non-MLK Samples in CLA

	MLK		Non-MLK	
	N	%	N	%
Two-year degrees				
Associate of Arts	0	0.0	1	1.8
Two-year degree candidate	0	0.0	0	0.0
Four-year degrees				
Bachelor of Arts	4	7.0	9	15.8
Bachelor of Science	3	5.3	8	14.0
Bachelor of Elected Studies	1	1.8	0	0.0
Four-year degree candidate	1	1.8	4	7.0
Degree complete	9	15.9	22	38.6
Degree incomplete	48	84.1	35	61.4
Total	57	100.0	57	100.0

MLK degree vs. no degree. This section reports a comparison of CLA MLK students who received degrees and those who did not receive degrees. The best summary indices of high school performance, pre-college test, and college performance variables were selected for this comparison and are reported in Table 9. Notably absent are the high school percentile rank and MSAT, which are not analysed because of the large amount of missing data on these variables in the MLK samples. The high school academic grade point average for the two groups differs by a half grade point, but the difference fails to reach statistical significance due to the large variance in both samples. The MLK students who received degrees have received substantially higher scores on the three ACT scales considered here than do their peers who did not complete degree requirements. In terms of college performance, graduates register for 1.8 credits more per quarter than non-graduates and successfully complete 6.4 credits more per quarter. The graduates' .96 coefficient of completion and 2.99 grade point average surpass the performances of the non-graduates by .36 and .66 respectively. All of the college performance index differences are statistically significant.

Non-MLK degree vs. no degree. This analysis, also summarized in Table 9, parallels that described above for the MLK students. The results differ in that the .41 higher high school academic grade point average for the graduates is significant; however, none of the ACT scale differences are. The pattern of college performance matches that of the MLK sample: Graduates attempt and complete more credits and achieve dramatically higher coefficients of completion and grade point averages than their non-graduating peers.

Table 9

Entrance Test and College Performance Summary for CLA Students Who Did and Did Not Receive Degrees

	Degree		No degree		
	Mean	S.D.	Mean	S.D.	Difference
MLK					
High school academic grade point average	2.95	.96	2.45	.79	+.50
ACT English	21.9	2.4	17.9	4.8	+4.0*
ACT Mathematics	24.9	4.9	17.1	7.3	+7.8*
ACT Composite	23.9	3.6	19.0	5.1	+4.9*
Attempted credits per quarter	15.6	1.5	13.8	1.5	+1.8*
Completed credits per quarter	14.7	1.8	8.3	4.3	+6.4*
Coefficient of completion	.96	.04	.60	.31	+.36*
Grade point average	2.99	.38	2.33	.72	+.66*
Non-MLK					
High school academic grade point average	3.29	.41	2.88	.61	+.41*
ACT English	22.9	3.4	21.3	3.0	+1.6
ACT Mathematics	27.7	3.8	25.4	5.8	+2.3
ACT Composite	26.1	2.7	24.5	3.5	+1.6
Attempted credits per quarter	15.4	1.2	14.3	1.7	+1.1*
Completed credits per quarter	14.7	1.6	10.7	4.4	+4.0*
Coefficient of completion	.96	.05	.74	.29	+.22*
Grade point average	3.07	.48	2.35	.78	+.72*

*$p < .05$

MLK degree vs. Non-MLK degree. The final sample comparison in CLA is between two groups of students who complete their courses of study. Table 10 shows a pattern of high school performance, entrance test scores, and college performance for the MLK students which is for all practical purposes identical to that of the Non-MLK students. None of the variable comparisons shows statistical significance. The average graduate has come to CLA with a B average and good ACT scores. He or she registers for the 15 credits per quarter that are necessary to complete a bachelor's degree in four years (12 quarters), completes almost all of these credits successfully, and maintains close to solid B average.

General College

MLK vs. Non-MLK. In contrast to the CLA results, there are no significant differences between the MLK and Non-MLK groups on the high school performance variables--high school percentile rank and high school academic grade point average (Table 11). These results are difficult to interpret since many students entering GC do not have high school performance data available. As in the CLA group, however, MLK and Non-MLK students in GC show marked differences on college entrance test variables. Table 12 shows the magnitude of these differences, all of which favor the Non-MLK sample and are statistically significant.

Several measures of college performance for MLK and Non-MLK students in GC are presented in Table 13. The average MLK student registers for 6.2 quarters, attempts 14.2 credits each quarter, and completes only 6.9 of these credits. Non-MLK students register for an average of 5.6 quarters, attempt 13.9 credits per quarter, and complete 10.2 of these credits.

Table 10

Entrance Test and College Performance Summary for MLK and Non-MLK Students in CLA Who Received Degrees

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference[a]
High school academic grade point average	2.95	.96	3.29	.41	-.34
ACT English	21.9	2.4	22.9	3.4	-1.0
ACT Mathematics	24.9	4.9	27.7	3.8	-2.8
ACT Composite	23.9	3.6	26.1	2.7	-2.2
Quarters to reach degree	11.9	1.1	12.5	1.5	-0.6
Attempted credits per quarter	15.6	1.5	15.4	1.2	+0.2
Completed credits per quarter	14.6	1.8	14.7	1.6	-0.1
Coefficient of completion	.95	.04	.96	.05	-.01
Grade point average	2.99	.38	3.07	.48	-.08

[a]Unless otherwise noted, differences are not statistically significant.

Table 11

Mean High School Performance of
MLK and Non-MLK Samples in GC

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
High school percentile rank[a]	36.3	24.2	32.0	20.2	+4.3
High school academic grade point average	1.73	0.60	1.84	0.48	-0.11

[a]High school percentile ranks were available for only 37.9 percent of the MLK GC sample but 88.7 percent of the Non-MLK GC sample.

Table 12

Mean College Entrance Test Scores for
MLK and Non-MLK Samples in GC

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
ACT					
English	12.4	4.9	16.2	4.7	-3.8*
Mathematics	12.0	5.8	16.4	5.2	-4.4*
Social Studies	13.8	6.4	17.2	6.3	-3.4*
Natural Science	14.4	5.5	18.2	5.2	-3.8*
Composite	13.2	4.4	17.2	4.1	-4.0*
MSAT[a]	21.2	7.7	28.3	8.8	-7.1*

[a]MSAT scores were available for only 41.1 percent of the MLK GC sample, but 83.9 percent of the Non-MLK GC sample.

*$p < .05$

Table 13

College Performance Summary of
MLK and Non-MLK Samples in GC

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
Quarters of registration	6.2	4.4	5.6	3.7	+0.6
Credits attempted per quarter	14.2	1.9	13.9	1.6	+0.3
Credits completed per quarter	6.9	4.8	10.2	4.0	-3.3*
Coefficient of completion	0.48	0.32	0.73	0.26	-0.25*
Grade point average	2.30	0.54	2.35	0.62	-0.05

*$p < .05$

Note that the only significant variable in this group is that of credits completed, with the Non-MLK group successfully completing significantly more credits than their MLK peers.

Two summary indices of college performance--the coefficient of completion and the grade point average--are also shown in Table 13. As is the case in CLA, there is a significant difference between the two samples on the coefficient of completion, but not on the grade point average. An examination of the data presented in Table 14 serves to clarify this finding. Shown are the average number of A through F, P, N, I, and W credits for each sample. Clearly, the MLK group is much more likely to receive credits of I, N, and W than their counterparts and much less likely to receive credits of A, B, and C. The former difference is undoubtedly responsible for the significant difference on the coefficient of completion since I, N, and W credits do not count toward satisfactory completion. While there is a trend away from receiving A, B, and C grades, the difference is apparently not substantial enough to affect the grade point average.

Progess toward two- and four-year degrees is summarized in Table 15. These data show that about 13 percent of the MLK group had either completed or substantially completed a degree compared with the 23 percent of the Non-MLK group who had achieved the same objective during the almost five year time span covered by this study. Not included in this analysis is work toward a bachelor's degree by students who received an intermediate two-year degree. Of the 13 two-year MLK graduates, two (15 percent) continued on to receive bachelor's degrees. Of the 25 two-year Non-MLK graduates, four (16 percent) completed a four-year degree during the period included in this study. Given that in both samples the number of students completing a degree is relatively small, it is of primary interest to ask what characteristics distinguish students receiving degrees from those who

Table 14

Mean Grade Distribution of
MLK and Non-MLK Samples in GC

	MLK		Non-MLK		
	Mean	%	Mean	%	Difference[a]
A credits	7.1	8.1	9.4	12.1	-4.0
B credits	13.8	15.8	18.5	23.8	-8.0
C credits	23.0	26.3	24.1	31.0	-4.7
D credits	4.9	5.6	4.5	5.8	-0.2
F credits	1.0	1.1	1.1	1.4	-0.3
P credits	5.9	6.7	5.2	6.7	-0.0
N credits	4.3	4.9	2.9	3.7	+1.2
I credits	17.9	20.5	6.4	8.2	+12.3
W credits	9.6	11.0	5.8	7.5	+3.5

Note. A Chi-square analysis of the two grade proportions indicates they are significantly different ($p < .05$).

[a]Differences reported for A through W credits are in percentages.

Table 15

Completion of Degree Requirements by
MLK and Non-MLK Samples in GC

	MLK		Non-MLK	
	N	%	N	%
Two-year degrees				
Associate of Arts	10	8.1	23	18.6
Two-year degree candidate	3	2.4	2	1.6
Four-year degrees				
Bachelor of Arts	1	0.8	1	0.8
Bachelor of Science	0	0.0	0	0.0
Bachelor of Elected Studies	0	0.0	2	1.6
Four-year degree candidate	2	1.6	0	0.0
Degree complete	16	12.9	28	22.6
Degree incomplete	108	87.1	96	77.4
Total	124	100.0	124	100.0

do not. The next section deals with this issue for MLK students and the succeeding section for Non-MLK students.

MLK degree vs. no degree. Table 16 provides summary statistics on selected variables which could be related to college success. (High school percentile rank is not included because a significant number of MLK students did not have this information available.) It is interesting to note that there is no substantial difference between students who receive and those who do not receive a degree on either high school academic GPA or any of the ACT sub-tests reported. Nor is there a difference between college grade point averages of these two groups. The major findings are that MLK students who receive degrees attempt slightly more credits each quarter and complete a substantially larger proportion of these credits (as measured both by number of credits completed and coefficient of completion) than MLK students not receiving degrees.

Non-MLK degree vs. no degree. As in the MLK group, neither differences in high school academic grade point average nor in ACT sub-test scores are seen in comparing the degree group with the no-degree group. For these students, the results indicate that students receiving degrees register for slightly more credits each quarter, complete substantially more credits (reflected in the proportions of the coefficient of completion), and have a somewhat higher grade point average than those not completing degrees during this period. These data are also shown in Table 16.

MLK degree vs. Non-MLK degree. We next considered the question of whether GC MLK students who receive degrees are similar to or different from Non-MLK students completing degrees. Table 17 reformats the data contained in the previous table to answer this question.

Table 16

Entrance Test and College Performance Summary for GC Students Who Did and Did Not Receive Degrees

	Degree		No degree		
	Mean	S.D.	Mean	S.D.	Difference
MLK					
High school academic grade point average	1.93	.50	1.70	.61	+.23
ACT English	12.9	5.1	12.4	4.9	+0.5
ACT Mathematics	10.7	6.8	12.2	5.7	-1.5
ACT Composite	12.6	5.1	13.4	4.3	-0.8
Attempted credits per quarter	15.1	2.1	14.0	1.9	+1.1*
Completed credits per quarter	12.9	2.3	6.1	4.4	+6.8*
Coefficient of completion	.86	.14	.42	.30	+.44*
Grade point average	2.62	.35	2.23	.55	+.39
Non-MLK					
High school academic grade point average	1.87	.42	1.83	.50	+.04
ACT English	15.8	4.4	16.2	4.8	-0.4
ACT Mathematics	15.7	4.2	16.6	5.5	-0.9
ACT Composite	17.1	3.1	17.2	4.3	-0.1
Attempted credits per quarter	14.6	1.6	13.7	1.6	+0.9*
Completed credits per quarter	13.4	2.1	9.3	4.0	+4.1*
Coefficient of completion	.92	.09	.67	.27	+.25*
Grade point average	2.71	.49	2.24	.61	+.47*

* $p < .05$

Table 17

Entrance Test and College Performance Summary for MLK and Non-MLK Students in GC Who Received Degrees

	MLK		Non-MLK		
	Mean	S.D.	Mean	S.D.	Difference
High school academic grade point average	1.93	.50	1.87	.42	+.06
ACT English	12.9	5.1	15.8	4.4	-2.9
ACT Mathematics	10.7	6.8	15.7	4.2	-5.0*
ACT Composite	12.7	5.1	17.2	3.1	-4.5*
Quarters to reach degree	9.1	3.2	7.6	2.2	+1.5
Attempted credits per quarter	15.1	2.1	14.6	1.6	+0.5
Completed credits per quarter	12.9	2.3	13.4	2.1	-0.5
Coefficient of completion	.86	.14	.92	.09	-.06
Grade point average	2.62	.35	2.71	.49	-.09

* $p < .05$

Examining entrance test data, there are significant differences favoring the Non-MLK sample on ACT Mathematics and ACT Composite. However, none of the indices of high school or college performance show any significant difference between MLK and Non-MLK students in GC completing degrees over an almost five-year span. We may conclude that all students in GC who receive degrees are somewhat alike when looking at their transcripts. MLK students show virtually identical records, on the average, to Non-MLK students in that college.

Discussion and Conclusions

This study was designed to give a thorough description of the background and progress toward graduation of the MLK student relative to that of the "average" student at the University of Minnesota. Based on a single differential criterion--whether a student entered through the MLK Program or through regular admissions procedures in the fall of 1970--two samples of identical size were selected within each of two colleges, CLA and GC. An analysis of available data on these students provides answers to a number of questions related to high school performance, college aptitude, college performance, and graduation status for the MLK student compared to the Non-MLK student.

First, given the admissions procedures applied to the fall, 1970 entering class, what kind of differential profiles of student characteristics result? We find that MLK students are older than their Non-MLK counterparts by one to two years. In CLA the MLK group is dominated by females, whereas the Non-MLK group is predominantly male. MLK students' college aptitude test scores are lower, and in CLA their high school performance is poorer than that of the Non-MLK student. MLK students,

whether in CLA or GC, are more likely to come from ethnic minority backgrounds than Non-MLK students.[3] Therefore, we may conclude that the MLK Program is admitting students whose characteristics match those stated as Program goals (i.e., students from minority backgrounds and/or those who might be classified as "high risk" academically according to criteria in general use). The study does not, of course, touch on many other background and entrance characteristics which would be of interest to those working with students. Among these would be previous experience in community work, motivation, interest and personality variables, and work experience. Some of these variables might be obtained through a review of student application materials; others could be collected only through talking with students or surveying interests and attitudes.[4]

Second, given the instructional and student support opportunities available to these two groups, what kind of differential college performance results? In terms of college grade point average, we find no noteworthy differences between MLK and Non-MLK students. However, the overall proportion of coursework successfully completed (relative to the amount attempted) by the Non-MLK students surpasses that of MLK students. As previously noted, this difference is largely caused by failure of MLK students to fulfill individual course requirements. A review of the

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[3]The University's fall, 1970 Compliance Report of Institutions of Higher Education, which is submitted to the Department of Health, Education, and Welfare, indicates that approximately eight percent of first-year undergraduate full-time students at the University were of ethnic minority background.

[4]A survey of the 772 MLK students registered at the University during winter quarter, 1975 was attempted in March of 1975 to determine the students' attitudes toward their college education and the MLK Program, as well as their use of MLK services. When the initial mailing plus a written followup yielded less than a 20 percent response rate, the project was abandoned. This experience raises questions about the feasibility of the questionnaire approach.

distribution of I grades for MLK students (not presented here in tabular form) shows that this difference is not due to a few students showing high proportions of incompletes (and thus affecting the averages), but rather that most MLK students have some problems in this area.

Third, is there a differential graduation rate between the two groups of students? Again, we find differences in both colleges, with the graduation rate for Non-MLK students approximately double that of MLK students. Here one should note that the actual percentage of students completing a degree within this period might be considered low even for the Non-MLK group: 38.6 percent in CLA and 22.6 percent in GC. To some extent, the differences in graduation rate may be explained by traditional means. We have already demonstrated that in many ways MLK students may be considered a "high risk" group academically, since they enter with somewhat lower test scores and high school performance, and both of these variables are valid predictors of "college success" as measured by grades.

Finally, what differences in background and college performance exist between MLK students who graduate and Non-MLK students who graduate? This study finds very few. In GC, Non-MLK graduates have significantly higher scores on the ACT Mathematics and ACT Composite scales. However, in that college, ages of the two groups are similar, as are all of the indices of high school performance. The rate of progress and quality of college work are almost identical. The similarities between the two groups of graduates are even more striking in CLA, where no significant differences are found on any of the variables studied; that is, for all practical purposes MLK students who graduate are not greatly different from Non-MLK students who graduate.

These findings are relevant to attainment of outcomes which are among the goals of the MLK Program, and to some extent the effectiveness of the Program can be evaluated in terms of these outcomes. We have already determined that the Program does admit students who match the target description. We move now to a discussion of the college performance of these students as it related to Program goals.

Grade point average has been the traditional index of quality of coursework. If one views the goal of the MLK Program as assisting students with below-average preparedness for college coursework in such a way as to offset this disadvantage, the grade point average data point to some success. The MLK students' mean grade point average, which is above a 2.00, does not differ significantly from that of the Non-MLK students. This outcome must be qualified, however, since the A through F grades which comprise the grade point average account for only 66 percent of the MLK students' coursework in CLA compared with 78 percent for the Non-MLK students, and only 60 percent of the MLK students' coursework in GC compared with 74 percent for the Non-MLK students.

Actual completion of a degree objective reflects persistence in addition to the ability to perform acceptable quality coursework. If one views the goal of the MLK Program as keeping students on the track toward a degree objective, the graduation rate data raise some questions. The percentage of MLK students who reached either a two-year or a four-year degree in the nearly five-year period covered by this study is low both in absolute terms and relative to Non-MLK students.

One final observation should be made concerning the MLK students who completed their degrees (profiles of these students are presented in Appendix C). It appears as if most of the MLK students who graduate would have been viewed at admission as having a reasonable probability of success within their respective colleges regardless of any special intervention during

the course of study. Now, if the MLK Program were meeting a goal of assisting "high risk" students through the University system toward degree objectives, we would expect that the high school and pre-college testing scores of the MLK graduates would differ, on the average, from those of Non-MLK graduates at least proportionally to the differences which exist in the entire group of entering students. We might surmise, given the comparability of grade point average data on the MLK and Non-MLK samples, that many of the MLK students who might be among the graduate group have bogged down with incomplete coursework.

In many ways, this study serves to raise more questions than it answers. It is our hope that the discussions the report generates will lead to further research which can provide more complete answers to the question of why students succeed--or do not succeed--at the University.

References

Hendel, D. D. College of Liberal Arts grades for students enrolled in the Martin Luther King Program at the University of Minnesota: fall quarter, 1970, through summer session II, 1972. Office for Student Affairs Research Bulletin, 13(11). Minneapolis: University of Minnesota, 1973. (a)

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Appendix A
Data Card Coding Format

Card 1

Col 1-6 University of Minnesota file number

Col 7 Sex
- 1 = male
- 2 = female

Col 8-9 Age as of 1 October 1970

Col 10 Ethnic group
- 1 = Native American
- 2 = Black
- 3 = Chicano
- 4 = Asian American
- 5 = White
- 6 = Other
- 7 = Unknown

Col 11-12 First University of Minnesota college attended

02 = Business	10 = Bio Sci	20 = Pub Hlth
03 = Vet Med	11 = Medicine	21 = Phys Ther
04 = Dentistry	12 = Med Tech	23 = Occ Ther
05 = Dent Hyg	14 = Nursing	24 = Duluth
06 = Education	15 = Pharmacy	25 = Mort Sci
07 = IT	17 = CLA	30 = Agric
08 = Grad	18 = Univ Coll	31 = Forestry
09 = Law	19 = Gen Coll	32 = Home Ec

Col 13-14 Second University of Minnesota college attended

Col 15-16 Third University of Minnesota college attended

Col 17-18 Fourth University of Minnesota college attended

Col 19-20 Fifth University of Minnesota college attended

Col 21 First degree received
- 1 = Associate of Arts
- 2 = Associate of Liberal Arts
- 3 = Bachelor of Arts
- 4 = Bachelor of Science
- 5 = Bachelor of Elected Studies
- 6 = Bachelor of Applied Studies
- 7 = IT bachelor's degree (engineering, science, architecture)
- 8 = Degree candidate or graduation fee paid for two-year degree
- 9 = Degree candidate or graduation fee paid for four-year degree

Col 22-23 College granting first degree

Col 24-25 Major in which first degree was earned

General College	Inst. of Technology
no breakdown	11 = Engineering
College of Liberal Arts	12 = Science
01 = Humanities and arts	13 = Architecture
02 = Natural sciences	Other colleges
03 = Social sciences	21 = Business
04 = Interdepartmental	22 = Education
05 = B.E.S.	23 = Allied medical

Col 26	Honors conferred with first degree 1 = cum laude 2 = magna cum laude 3 = summa cum laude
Col 27-29	Quarters registered at University of Minnesota prior to receiving first degree (to one decimal place; summer session = .5 quarter)
Col 30	Blank
Col 31	Second degree received
Col 32-33	College granting second degree
Col 34-35	Major in which second degree was earned
Col 36	Honors conferred with second degree
Col 37-39	Quarters registered between first and second degrees (to one decimal place; summer session = .5 quarter)
Col 40	Blank
Col 41-43	Credits transferred to University of Minnesota at entry in fall, 1970 (round fractions .5 or higher to next whole number)
Col 44-46	Total registered quarters at University of Minnesota prior to receiving baccalaureate degree (to one decimal place; summer session = .5 quarter)
Col 47	Summer sessions attended? 1 = yes blank = no
Col 48	Number of summer sessions attended
Col 49-50	Blank
Col 51-53	Number of credits of A earned
Col 54-56	Number of credits of B earned
Col 57-59	Number of credits of C earned
Col 60-62	Number of credits of D earned
Col 63-65	Number of credits of F earned
Col 66-68	Number of credits of P earned
Col 69-71	Number of credits of N earned
Col 72-74	Number of credits of I earned
Col 75-77	Number of credits of W earned (all credits three digits, no decimal place)
Col 78	Blank
Col 79	Group membership 1 = non-MLK 2 = MLK
Col 80	Card number 1 = transcript data 2 = Applicant File data

Card 2

Col 1-6	University of Minnesota file number
Col 7	Sex
Col 8-9	MSAT raw score
Col 10-11	High school percentile rank
Col 12-13	ACT English standard score
Col 14-15	ACT Mathematics standard score
Col 16-17	ACT Social Studies standard score
Col 18-19	ACT Natural Science standard score
Col 20-21	ACT Composite standard score
Col 22-23	High school academic GPA
Col 24	Blank
Col 25-26	University of Minnesota predicted GPA

Appendix B
Coding Remarks

1. The samples include only students working toward a degree; transient or adult special registrations are disregarded unless followed by a registration with a degree objective.

2. Coursework done after receipt of a bachelor's degree is not recorded. Graduate degrees received at the University are, likewise, not recorded.

3. Coursework done at other institutions after initial registration at the University which is applied toward a University degree is recorded in both the grade distribution and total quarter tallies.

4. Summer work done at other institutions is recorded as summer work at the University, namely, as one-half quarter per session.

5. The grade of S is tallied as a P grade.

6. Credits earned by CLEP exam or other special exams are included in the grade distribution tallies as P grades.

7. If an entire quarter's coursework is cancelled prior to the recording of the individual course titles on the transcript, the quarter is <u>not</u> counted in the quarter total category. If the entire quarter's coursework is cancelled after the individual course titles are recorded, the quarter <u>is</u> included in the quarter total tally and the credits cancelled are tallied in the grade distribution as W grades.

8. The quarter tally in the second degree section includes only quarters of registration after receipt of the first degree.

9. Extension Division work done concurrently with regular registration for a given quarter is considered part of the regular course load of that quarter and is, therefore, included in the grade distribution tallies.

10. Extension Division work done at the University prior to an initial regular registration in fall, 1970 does not disqualify a student from the sample, but is tallied as entry credits and <u>not</u> recorded in the grade distribution tallies.

11. Extension Division work done during a quarter in which the student did not maintain regular registration is considered as a complete quarter's work and counted in the total quarter tally <u>only</u> if more than eight credits were taken. Regardless of total credits taken during such a quarter, the credits are recorded in the grade distribution tallies.

Appendix C
Profiles of CLA and GC MLK Graduates

Student	Sex	Age at entr	Ethnic back-ground	HSR	HS acad GPA	ACT E	ACT M	ACT SS	ACT NS	ACT C	Qtrs to degr	Mean credits per quarter att	Mean credits per quarter comp	Cumulative University GPA	Cumulative University CC	Degree/college
CLA Graduates																
1	F	18	White	85	3.38	21	26	26	20	23	12.5	14.8	14.5	2.69	.98	B.E.S. (CLA)
2	M	18	White	74	2.57	19	26	22	26	23	12.5	14.4	14.4	3.37	1.00	B.A. (CLA)
3	M	18	---	83	2.75	18	27	12	19	19	13.5	14.7	13.5	2.25	.92	B.S. (Business)
4	F	17	Chicano	73	2.50	23	15	21	18	19	11.0	16.1	15.6	2.63	.97	4-year cand. (CLA)
5	F	17	White	93	3.58	24	28	27	29	27	11.0	16.8	16.4	2.88	.98	B.A. (CLA)
6	F	18	Black	--	3.13	23	27	27	27	26	13.0	14.1	14.1	3.21	1.00	B.S.[a] (Med. Tech.)
7	F	18	White	98	3.80	25	30	31	31	29	10.0	18.4	18.0	3.27	.98	B.A. (CLA)
8	M	18	Chicano	58	2.20	22	20	29	27	25	12.0	16.5	15.0	3.26	.91	B.A. (CLA)
9	F	34	Black	--	----	--	--	--	--	--	12.0	14.0	12.4	2.88	.89	B.S. (Education)
GC Graduates																
1	F	23	Black	--	----	--	--	--	--	--	6.0	15.3	15.0	2.13	.98	A.A. (GC)
2	F	17	White	34	2.29	20	24	21	25	23	12.5	15.2	14.2	2.67	.93	4-year cand. (CLA)
3	F	18	White	24	1.67	20	07	16	18	15	6.0	16.1	15.5	2.26	.96	A.A. (GC)
											7.0					4-year cand. (CLA)
4	F	18	White	24	1.67	12	16	16	15	15	6.5	14.0	14.0	2.34	1.00	2-year cand. (GC)
5	M	41	Black	--	----	10	01	19	11	10	16.5	20.1	14.4	3.34	.72	B.A. (CLA)
6	M	22	White	--	2.40	--	--	--	--	--	8.0	16.3	16.0	3.15	.98	2-year cand. (GC)

continued

Student	Sex	Age at entr	Ethnic back-ground	HSR	HS acad GPA	ACT E	ACT M	ACT SS	ACT NS	ACT C	Qtrs to degr	Mean credits per quarter att	Mean credits per quarter comp	Cumulative University GPA	Cumulative University CC	Degree/college
GC graduates, continued																
7	M	18	Native American	18	1.67	15	20	20	23	20	9.0	17.0	12.2	2.77	.72	A.A. (GC)
8	M	31	Black	--	1.43	16	15	08	13	13	6.5	15.2	14.9	2.69	.98	A.A. (GC)
9	F	22	Black	--	1.50	17	02	17	16	13	6.0	18.0	17.2	2.99	.96	A.A. (GC)
10	F	25	Black	--	2.65	07	06	06	12	08	7.5	13.6	12.3	2.49	.90	A.A. (GC)
											8.0					B.A. (CLA)
11	F	24	Black	--	----	07	05	01	06	05	13.0	15.9	15.9	2.54	1.00	4-year cand. (CLA)
12	F	25	Black	--	3.17	04	08	02	09	06	9.0	18.1	11.4	2.36	.63	A.A. (GC)
13	F	21	Black	31	1.90	14	08	15	07	11	11.5	14.1	8.9	2.28	.63	2-year cand. (GC)
14	F	21	Black	--	1.78	12	14	05	06	09	9.5	17.4	11.5	2.92	.66	A.A. (GC)
15	F	30	Black	--	1.75	09	08	15	15	12	6.5	14.9	14.2	2.32	.95	A.A. (GC)
16	F	23	Black	--	1.83	18	16	14	15	16	12.0	16.3	14.8	2.64	.91	A.A. (GC)

[a] cum laude